

SEQUENCE LISTING

<110> Epimmune Inc.  
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Fikes, John  
Tangri, Shabnam  
Sette, Alessandro

<120> Heteroclitic Analogs and Related Methods

<130> 2060.009PC05

<150> US 60/413,471

<151> 2002-09-26

<150> US 10/116,118

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<160> 196

<170> PatentIn version 3.2

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<223> Synthetic peptide derived from Plasmodium falciparum

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Asn Val Val Asn Ser  
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 Antigen

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<220>

<223> Synthetic peptide derived from Hepatitis B Virus

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<223> Synthetic peptide derived from Homo sapiens Human Leukocyte Antigen

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<223> Synthetic peptide derived from Homo sapiens Human Leukocyte Antigen

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<213> Homo sapiens

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Arg	Leu	Leu	Leu	Thr	Ala	Ser	Leu	Leu	Thr	Phe	Trp	Asn	Pro	Pro	Thr	20	25	30	
Thr	Ala	Lys	Leu	Thr	Ile	Glu	Ser	Thr	Pro	Phe	Asn	Val	Ala	Glu	Gly	35	40	45	
Lys	Glu	Val	Leu	Leu	Leu	Val	His	Asn	Leu	Pro	Gln	His	Leu	Phe	Gly	50	55	60	
Tyr	Ser	Trp	Tyr	Lys	Gly	Glu	Arg	Val	Asp	Gly	Asn	Arg	Gln	Ile	Ile	65	70	75	80
Gly	Tyr	Val	Ile	Gly	Thr	Gln	Gln	Ala	Thr	Pro	Gly	Pro	Ala	Tyr	Ser	85	90	95	
Gly	Arg	Glu	Ile	Ile	Tyr	Pro	Asn	Ala	Ser	Leu	Leu	Ile	Gln	Asn	Ile	100	105	110	
Ile	Gln	Asn	Asp	Thr	Gly	Phe	Tyr	Thr	Leu	His	Val	Ile	Lys	Ser	Asp	115	120	125	
Leu	Val	Asn	Glu	Glu	Ala	Thr	Gly	Gln	Phe	Arg	Val	Tyr	Pro	Glu	Leu	130	135	140	
Pro	Lys	Pro	Ser	Ile	Ser	Ser	Asn	Asn	Ser	Lys	Pro	Val	Glu	Asp	Lys	145	150	155	160
Asp	Ala	Val	Ala	Phe	Thr	Cys	Glu	Pro	Glu	Thr	Gln	Asp	Ala	Thr	Tyr	165	170	175	
Leu	Trp	Trp	Val	Asn	Asn	Gln	Ser	Leu	Pro	Val	Ser	Pro	Arg	Leu	Gln	180	185	190	
Leu	Ser	Asn	Gly	Asn	Arg	Thr	Leu	Thr	Leu	Phe	Asn	Val	Thr	Arg	Asn	195	200	205	
Asp	Thr	Ala	Ser	Tyr	Lys	Cys	Glu	Thr	Gln	Asn	Pro	Val	Ser	Ala	Arg	210	215	220	
Arg	Ser	Asp	Ser	Val	Ile	Leu	Asn	Val	Leu	Tyr	Gly	Pro	Asp	Ala	Pro	225	230	235	240

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 245 250 255

Leu Ser Cys His Ala Ala Ser Asn Pro Pro Ala Gln Tyr Ser Trp Phe  
 260 265 270

Val Asn Gly Thr Phe Gln Gln Ser Thr Gln Glu Leu Phe Ile Pro Asn  
 275 280 285

Ile Thr Val Asn Asn Ser Gly Ser Tyr Thr Cys Gln Ala His Asn Ser  
 290 295 300

Asp Thr Gly Leu Asn Arg Thr Thr Val Thr Thr Ile Thr Val Tyr Ala  
 305 310 315 320

Glu Pro Pro Lys Pro Phe Ile Thr Ser Asn Asn Ser Asn Pro Val Glu  
 325 330 335

Asp Glu Asp Ala Val Ala Leu Thr Cys Glu Pro Glu Ile Gln Asn Thr  
 340 345 350

Thr Tyr Leu Trp Trp Val Ile Ile Arg Ser Leu Pro Val Ser Pro Arg  
 355 360 365

Leu Gln Leu Ser Asn Asp Asn Arg Thr Leu Thr Leu Leu Ser Val Thr  
 370 375 380

Arg Asn Asp Val Gly Pro Tyr Glu Cys Gly Ile Gln Asn Glu Leu Ser  
 385 390 395 400

Val Asp His Ser Asp Pro Val Ile Leu Asn Val Leu Tyr Gly Pro Asp  
 405 410 415

Asp Pro Thr Ile Ser Pro Ser Tyr Thr Tyr Tyr Arg Pro Gly Val Asn  
 420 425 430

Leu Ser Leu Ser Cys His Ala Ala Ser Asn Pro Pro Ala Gln Tyr Ser  
 435 440 445

Trp Leu Ile Asp Gly Asn Ile Gln Gln His Thr Gln Glu Leu Phe Ile  
 450 455 460

Ser Asn Ile Thr Glu Lys Asn Ser Gly Leu Tyr Thr Cys Gln Ala Asn  
 465 470 475 480

Asn Ser Ala Ser Gly His Ser Arg Thr Thr Val Lys Thr Ile Thr Val  
                   485                                  490                                  495

Ser Ala Glu Leu Pro Lys Pro Ser Ile Ser Ser Asn Asn Ser Lys Pro  
                   500                                  505                                  510

Val Glu Asp Lys Asp Ala Val Ala Phe Thr Cys Glu Pro Glu Ala Gln  
                   515                                  520                                  525

Asn Thr Thr Tyr Leu Trp Trp Val Asn Gly Gln Ser Leu Pro Val Ser  
                   530                                  535                                  540

Pro Arg Leu Gln Leu Ser Asn Gly Asn Arg Thr Leu Thr Leu Phe Asn  
                   545                                  550                                  555                                  560

Val Thr Arg Asn Asp Ala Arg Ala Tyr Val Cys Gly Ile Gln Asn Ser  
                   565                                  570                                  575

Val Ser Ala Asn Arg Ser Asp Pro Val Thr Leu Asp Val Leu Tyr Gly  
                   580                                  585                                  590

Pro Asp Thr Pro Ile Ile Ser Pro Pro Asp Ser Ser Tyr Leu Ser Gly  
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Ala Asn Leu Asn Leu Ser Cys His Ser Ala Ser Asn Pro Ser Pro Gln  
                   610                                  615                                  620

Tyr Ser Trp Arg Ile Asn Gly Ile Pro Gln Gln His Thr Gln Val Leu  
                   625                                  630                                  635                                  640

Leu Ile Ala Lys Ile Gln Pro Asn Asn Asn Gly Thr Tyr Ala Cys Phe  
                   645                                  650                                  655

Val Ser Asn Leu Ala Thr Gly Arg Asn Asn Ser Ile Val Lys Ser Ile  
                   660                                  665                                  670

Thr Val Ser Ala Ser Gly Thr Ser Pro Gly Leu Ser Ala Gly Ala Thr  
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Thr Glu Glu Gln Gln Thr Ala Ser Ser Ser Thr Leu Val Glu Val  
 35 40 45

Thr Leu Gly Glu Val Pro Ala Ala Asp Ser Pro Ser Pro Pro His Ser  
 50 55 60

Pro Gln Gly Ala Ser Ser Phe Ser Thr Thr Ile Asn Tyr Thr Leu Trp  
 65 70 75 80

Arg Gln Ser Asp Glu Gly Ser Ser Asn Gln Glu Glu Glu Gly Pro Arg  
 85 90 95

Met Phe Pro Asp Leu Glu Ser Glu Phe Gln Ala Ala Ile Ser Arg Lys  
 100 105 110

Met Val Glu Leu Val His Phe Leu Leu Leu Lys Tyr Arg Ala Arg Glu  
 115 120 125

Pro Val Thr Lys Ala Glu Met Leu Glu Ser Val Leu Arg Asn Cys Gln  
 130 135 140

Asp Phe Phe Pro Val Ile Phe Ser Lys Ala Ser Glu Tyr Leu Gln Leu  
 145 150 155 160

Val Phe Gly Ile Glu Val Val Glu Val Val Pro Ile Ser His Leu Tyr  
 165 170 175

Ile Leu Val Thr Cys Leu Gly Leu Ser Tyr Asp Gly Leu Leu Gly Asp  
 180 185 190

Asn Gln Val Met Pro Lys Thr Gly Leu Leu Ile Ile Val Leu Ala Ile  
 195 200 205

Ile Ala Ile Glu Gly Asp Cys Ala Pro Glu Glu Lys Ile Trp Glu Glu  
 210 215 220

Leu Ser Met Leu Glu Val Phe Glu Gly Arg Glu Asp Ser Val Phe Ala  
 225 230 235 240

His Pro Arg Lys Leu Leu Met Gln Asp Leu Val Gln Glu Asn Tyr Leu  
245 250 255

Glu Tyr Arg Gln Val Pro Gly Ser Asp Pro Ala Cys Tyr Glu Phe Leu  
260 265 270

Trp Gly Pro Arg Ala Leu Ile Glu Thr Ser Tyr Val Lys Val Leu His  
275 280 285

His Thr Leu Lys Ile Gly Gly Glu Pro His Ile Ser Tyr Pro Pro Leu  
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His Glu Arg Ala Leu Arg Glu Gly Glu Glu  
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<400> 70

Met Lys Trp Val Thr Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala  
1 5 10 15

Tyr Ser Arg Gly Val Phe Arg Arg Asp Ala His Lys Ser Glu Val Ala  
20 25 30

His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu  
35 40 45

Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val  
50 55 60

Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp  
65 70 75 80

Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp  
85 90 95

Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala  
100 105 110

Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln  
115 120 125

His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val  
 130 135 140

Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys  
 145 150 155 160

Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro  
 165 170 175

Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys  
 180 185 190

Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu  
 195 200 205

Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys  
 210 215 220

Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe Lys Ala Trp Ala Val  
 225 230 235 240

Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe Ala Glu Val Ser  
 245 250 255

Lys Leu Val Thr Asp Leu Thr Lys Val His Thr Glu Cys Cys His Gly  
 260 265 270

Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr Ile  
 275 280 285

Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys Glu Cys Cys Glu  
 290 295 300

Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu Val Glu Asn Asp  
 305 310 315 320

Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp Phe Val Glu Ser  
 325 330 335

Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp Val Phe Leu Gly  
 340 345 350

Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp Tyr Ser Val Val  
 355 360 365

Leu Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr Leu Glu Lys Cys

370	375	380
Cys Ala Ala Ala Asp	Pro His Glu Cys Tyr	Ala Lys Val Phe Asp Glu
385	390	395 400
Phe Lys Pro Leu Val	Glu Glu Pro Gln Asn Leu Ile Lys Gln Asn Cys	
	405	410 415
Glu Leu Phe Lys Gln Leu Gly Glu Tyr Lys Phe Gln Asn Ala Leu Leu		
	420	425 430
Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val		
	435	440 445
Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Cys Lys His		
	450	455 460
Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val		
	465	470 475 480
Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro Val Ser Asp Arg		
	485	490 495
Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe		
	500	505 510
Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala		
	515	520 525
Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu		
	530	535 540
Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys		
	545	550 555 560
Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala		
	565	570 575
Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe		
	580	585 590
Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly		
	595	600 605

Leu



<210> 71  
 <211> 212  
 <212> PRT  
 <213> Hepatitis B virus

<400> 71

Met Gln Leu Phe His Leu Cys Leu Ile Ile Ser Cys Ser Cys Pro Thr  
 1 5 10 15

Val Gln Ala Ser Lys Leu Cys Leu Gly Trp Leu Trp Gly Met Asp Ile  
 20 25 30

Asp Pro Tyr Lys Glu Phe Gly Ala Thr Val Glu Leu Leu Ser Phe Leu  
 35 40 45

Pro Ser Asp Phe Phe Pro Ser Val Arg Asp Leu Leu Asp Thr Ala Ser  
 50 55 60

Ala Leu Tyr Arg Glu Ala Leu Glu Ser Pro Glu His Cys Ser Pro His  
 65 70 75 80

His Thr Ala Leu Arg Gln Ala Ile Leu Cys Trp Gly Glu Leu Met Thr  
 85 90 95

Leu Ala Thr Trp Val Gly Val Asn Leu Glu Asp Pro Ala Ser Arg Asp  
 100 105 110

Leu Val Val Ser Tyr Val Asn Thr Asn Met Gly Leu Lys Phe Arg Gln  
 115 120 125

Leu Leu Trp Phe His Ile Ser Cys Leu Thr Phe Gly Arg Glu Thr Val  
 130 135 140

Ile Glu Tyr Leu Val Ser Phe Gly Val Trp Ile Arg Thr Pro Pro Ala  
 145 150 155 160

Tyr Arg Pro Pro Asn Ala Pro Ile Leu Ser Thr Leu Pro Glu Thr Thr  
 165 170 175

Val Val Arg Arg Arg Gly Arg Ser Pro Arg Arg Arg Thr Pro Ser Pro  
 180 185 190

Arg Arg Arg Arg Ser Gln Ser Pro Arg Arg Arg Arg Ser Gln Ser Arg  
 195 200 205

Glu Ser Gln Cys  
210

<210> 72  
<211> 2768  
<212> PRT  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (734)..(734)  
<223> Xaa can be any naturally occurring amino acid

<220>  
<221> misc\_feature  
<222> (1028)..(1028)  
<223> Xaa can be any naturally occurring amino acid

<220>  
<221> misc\_feature  
<222> (2501)..(2501)  
<223> Xaa can be any naturally occurring amino acid

<400> 72

Met Ala Leu Val Leu Glu Ile Phe Thr Leu Leu Ala Ser Ile Cys Trp  
1 5 10 15

Val Ser Ala Asn Ile Phe Glu Tyr Gln Val Asp Ala Gln Pro Leu Arg  
20 25 30

Pro Cys Glu Leu Gln Arg Glu Thr Ala Phe Leu Lys Gln Ala Asp Tyr  
35 40 45

Val Pro Gln Cys Ala Glu Asp Gly Ser Phe Gln Thr Val Gln Cys Gln  
50 55 60

Asn Asp Gly Arg Ser Cys Trp Cys Val Gly Ala Asn Gly Ser Glu Val  
65 70 75 80

Leu Gly Ser Arg Gln Pro Gly Arg Pro Val Ala Cys Leu Ser Phe Cys  
85 90 95

Gln Leu Gln Lys Gln Gln Ile Leu Leu Ser Gly Tyr Ile Asn Ser Thr  
100 105 110

Asp Thr Ser Tyr Leu Pro Gln Cys Gln Asp Ser Gly Asp Tyr Ala Pro  
115 120 125

Val Gln Cys Asp Val Gln Gln Val Gln Cys Trp Cys Val Asp Ala Glu  
130 135 140

Gly Met Glu Val Tyr Gly Thr Arg Gln Leu Gly Arg Pro Lys Arg Cys  
 145 150 155 160

Pro Arg Ser Cys Glu Ile Arg Asn Arg Arg Leu Leu His Gly Val Gly  
 165 170 175

Asp Lys Ser Pro Pro Gln Cys Ser Ala Glu Gly Glu Phe Met Pro Val  
 180 185 190

Gln Cys Lys Phe Val Asn Thr Thr Asp Met Met Ile Phe Asp Leu Val  
 195 200 205

His Ser Tyr Asn Arg Phe Pro Asp Ala Phe Val Thr Phe Ser Ser Phe  
 210 215 220

Gln Arg Arg Phe Pro Glu Val Ser Gly Tyr Cys His Cys Ala Asp Ser  
 225 230 235 240

Gln Gly Arg Glu Leu Ala Glu Thr Gly Leu Glu Leu Leu Leu Asp Glu  
 245 250 255

Ile Tyr Asp Thr Ile Phe Ala Gly Leu Asp Leu Pro Ser Thr Phe Thr  
 260 265 270

Glu Thr Thr Leu Tyr Arg Ile Leu Gln Arg Arg Phe Leu Ala Val Gln  
 275 280 285

Ser Val Ile Ser Gly Arg Phe Arg Cys Pro Thr Lys Cys Glu Val Glu  
 290 295 300

Arg Phe Thr Ala Thr Ser Phe Gly His Pro Tyr Val Pro Ser Cys Arg  
 305 310 315 320

Arg Asn Gly Asp Tyr Gln Ala Val Gln Cys Gln Thr Glu Gly Pro Cys  
 325 330 335

Trp Cys Val Asp Ala Gln Gly Lys Glu Met His Gly Thr Arg Gln Gln  
 340 345 350

Gly Glu Pro Pro Ser Cys Ala Glu Gly Gln Ser Cys Ala Ser Glu Arg  
 355 360 365

Gln Gln Ala Leu Ser Arg Leu Tyr Phe Gly Thr Ser Gly Tyr Phe Ser  
 370 375 380

Gln His Asp Leu Phe Ser Ser Pro Glu Lys Arg Trp Ala Ser Pro Arg  
 385 390 395 400

Val Ala Arg Phe Ala Thr Ser Cys Pro Pro Thr Ile Lys Glu Leu Phe  
 405 410 415

Val Asp Ser Gly Leu Leu Arg Pro Met Val Glu Gly Gln Ser Gln Gln  
 420 425 430

Phe Ser Val Ser Glu Asn Leu Leu Lys Glu Ala Ile Arg Ala Ile Phe  
 435 440 445

Pro Ser Arg Gly Leu Ala Arg Leu Ala Leu Gln Phe Thr Thr Asn Pro  
 450 455 460

Lys Arg Leu Gln Gln Asn Leu Phe Gly Gly Lys Phe Leu Val Asn Val  
 465 470 475 480

Gly Gln Phe Asn Leu Ser Gly Ala Leu Gly Thr Arg Gly Thr Phe Asn  
 485 490 495

Phe Ser Gln Phe Phe Gln Gln Leu Gly Leu Ala Ser Phe Leu Asn Gly  
 500 505 510

Gly Arg Gln Glu Asp Leu Ala Lys Pro Leu Ser Val Gly Leu Asp Ser  
 515 520 525

Asn Ser Ser Thr Gly Thr Pro Glu Ala Ala Lys Lys Asp Gly Thr Met  
 530 535 540

Asn Lys Pro Thr Val Gly Ser Phe Gly Phe Glu Ile Asn Leu Gln Glu  
 545 550 555 560

Asn Gln Asn Ala Leu Lys Phe Leu Ala Ser Leu Leu Glu Leu Pro Glu  
 565 570 575

Phe Leu Leu Phe Leu Gln His Ala Ile Ser Val Pro Glu Asp Val Ala  
 580 585 590

Arg Asp Leu Gly Asp Val Met Glu Thr Val Leu Ser Ser Gln Thr Cys  
 595 600 605

Glu Gln Thr Pro Glu Arg Leu Phe Val Pro Ser Cys Thr Thr Glu Gly  
 610 615 620

Ser Tyr Glu Asp Val Gln Cys Phe Ser Gly Glu Cys Trp Cys Val Asn  
625 630 635 640

Ser Trp Gly Lys Glu Leu Pro Gly Ser Arg Val Arg Gly Gly Gln Pro  
645 650 655

Arg Cys Pro Thr Asp Cys Glu Lys Gln Arg Ala Arg Met Gln Ser Leu  
660 665 670

Met Gly Ser Gln Pro Ala Gly Ser Thr Leu Phe Val Pro Ala Cys Thr  
675 680 685

Ser Glu Gly His Phe Leu Pro Val Gln Cys Phe Asn Ser Glu Cys Tyr  
690 695 700

Cys Val Asp Ala Glu Gly Gln Ala Ile Pro Gly Thr Arg Ser Ala Ile  
705 710 715 720

Gly Lys Pro Lys Lys Cys Pro Thr Pro Cys Gln Leu Gln Xaa Glu Gln  
725 730 735

Ala Phe Leu Arg Thr Val Gln Ala Leu Leu Ser Asn Ser Ser Met Leu  
740 745 750

Pro Thr Leu Ser Asp Thr Tyr Ile Pro Gln Cys Ser Thr Asp Gly Gln  
755 760 765

Trp Arg Gln Val Gln Cys Asn Gly Pro Pro Glu Gln Val Phe Glu Leu  
770 775 780

Tyr Gln Arg Trp Glu Ala Gln Asn Lys Gly Gln Asp Leu Thr Pro Ala  
785 790 795 800

Lys Leu Leu Val Lys Ile Met Ser Tyr Arg Glu Ala Ala Ser Gly Asn  
805 810 815

Phe Ser Leu Phe Ile Gln Ser Leu Tyr Glu Ala Gly Gln Gln Asp Val  
820 825 830

Phe Pro Val Leu Ser Gln Tyr Pro Ser Leu Gln Asp Val Pro Leu Ala  
835 840 845

Ala Leu Glu Gly Lys Arg Pro Gln Pro Arg Glu Asn Ile Leu Leu Glu  
850 855 860

Pro Tyr Leu Phe Trp Gln Ile Leu Asn Gly Gln Leu Ser Gln Tyr Pro

865		870		875		880
Gly Ser Tyr Ser Asp Phe Ser Thr Pro Leu Ala His Phe Asp Leu Arg						
		885		890		895
Asn Cys Trp Cys Val Asp Glu Ala Gly Gln Glu Leu Glu Gly Met Arg						
		900		905		910
Ser Glu Pro Ser Lys Leu Pro Thr Cys Pro Gly Ser Cys Glu Glu Ala						
		915		920		925
Lys Leu Arg Val Leu Gln Phe Ile Arg Glu Thr Glu Glu Ile Val Ser						
		930		935		940
Ala Ser Asn Ser Ser Arg Phe Pro Leu Gly Glu Ser Phe Leu Val Ala						
		945		950		955
						960
Lys Gly Ile Arg Leu Arg Asn Glu Asp Leu Gly Leu Pro Pro Leu Phe						
		965		970		975
Pro Pro Arg Glu Ala Phe Ala Glu Gln Phe Leu Arg Gly Ser Asp Tyr						
		980		985		990
Ala Ile Arg Leu Ala Ala Gln Ser Thr Leu Ser Phe Tyr Gln Arg Arg						
		995		1000		1005
Arg Phe Ser Pro Asp Asp Ser Ala Gly Ala Ser Ala Leu Leu Arg						
		1010		1015		1020
Ser Gly Pro Tyr Xaa Pro Gln Cys Asp Ala Phe Gly Ser Trp Glu						
		1025		1030		1035
Pro Val Gln Cys His Ala Gly Thr Gly His Cys Trp Cys Val Asp						
		1040		1045		1050
Glu Lys Gly Gly Phe Ile Pro Gly Ser Leu Thr Ala Arg Ser Leu						
		1055		1060		1065
Gln Ile Pro Gln Cys Pro Thr Thr Cys Glu Lys Ser Arg Thr Ser						
		1070		1075		1080
Gly Leu Leu Ser Ser Trp Lys Gln Ala Arg Ser Gln Glu Asn Pro						
		1085		1090		1095
Ser Pro Lys Asp Leu Phe Val Pro Ala Cys Leu Glu Thr Gly Glu						
		1100		1105		1110

Tyr	Ala	Arg	Leu	Gln	Ala	Ser	Gly	Ala	Gly	Thr	Trp	Cys	Val	Asp
1115						1120					1125			
Pro	Ala	Ser	Gly	Glu	Glu	Leu	Arg	Pro	Gly	Ser	Ser	Ser	Ser	Ala
1130						1135					1140			
Gln	Cys	Pro	Ser	Leu	Cys	Asn	Val	Leu	Lys	Ser	Gly	Val	Leu	Ser
1145						1150					1155			
Arg	Arg	Val	Ser	Pro	Gly	Tyr	Val	Pro	Ala	Cys	Arg	Ala	Glu	Asp
1160						1165					1170			
Gly	Gly	Phe	Ser	Pro	Val	Gln	Cys	Asp	Gln	Ala	Gln	Gly	Ser	Cys
1175						1180					1185			
Trp	Cys	Val	Met	Asp	Ser	Gly	Glu	Glu	Val	Pro	Gly	Thr	Arg	Val
1190						1195					1200			
Thr	Gly	Gly	Gln	Pro	Ala	Cys	Glu	Ser	Pro	Arg	Cys	Pro	Leu	Pro
1205						1210					1215			
Phe	Asn	Ala	Ser	Glu	Val	Val	Gly	Gly	Thr	Ile	Leu	Cys	Glu	Thr
1220						1225					1230			
Ile	Ser	Gly	Pro	Thr	Gly	Ser	Ala	Met	Gln	Gln	Cys	Gln	Leu	Leu
1235						1240					1245			
Cys	Arg	Gln	Gly	Ser	Trp	Ser	Val	Phe	Pro	Pro	Gly	Pro	Leu	Ile
1250						1255					1260			
Cys	Ser	Leu	Glu	Ser	Gly	Arg	Trp	Glu	Ser	Gln	Leu	Pro	Gln	Pro
1265						1270					1275			
Arg	Ala	Cys	Gln	Arg	Pro	Gln	Leu	Trp	Gln	Thr	Ile	Gln	Thr	Gln
1280						1285					1290			
Gly	His	Phe	Gln	Leu	Gln	Leu	Pro	Pro	Gly	Lys	Met	Cys	Ser	Ala
1295						1300					1305			
Asp	Tyr	Ala	Gly	Leu	Leu	Gln	Thr	Phe	Gln	Val	Phe	Ile	Leu	Asp
1310						1315					1320			
Glu	Leu	Thr	Ala	Arg	Gly	Phe	Cys	Gln	Ile	Gln	Val	Lys	Thr	Phe
1325						1330					1335			

Gly Thr	Leu Val Ser Ile	Pro	Val Cys Asn Asn	Ser	Ser Val Gln
1340		1345		1350	
Val Gly	Cys Leu Thr Arg	Glu	Arg Leu Gly Val	Asn	Val Thr Trp
1355		1360		1365	
Lys Ser	Arg Leu Glu Asp	Ile	Pro Val Ala Ser	Leu	Pro Asp Leu
1370		1375		1380	
His Asp	Ile Glu Arg Ala	Leu	Val Gly Lys Asp	Leu	Leu Gly Arg
1385		1390		1395	
Phe Thr	Asp Leu Ile Gln	Ser	Gly Ser Phe Gln	Leu	His Leu Asp
1400		1405		1410	
Ser Lys	Thr Phe Pro Ala	Glu	Thr Ile Arg Phe	Leu	Gln Gly Asp
1415		1420		1425	
His Phe	Gly Thr Ser Pro	Arg	Thr Trp Phe Gly	Cys	Ser Glu Gly
1430		1435		1440	
Phe Tyr	Gln Val Leu Thr	Ser	Glu Ala Ser Gln	Asp	Gly Leu Gly
1445		1450		1455	
Cys Val	Lys Cys Pro Glu	Gly	Ser Tyr Ser Gln	Asp	Glu Glu Cys
1460		1465		1470	
Ile Pro	Cys Pro Val Gly	Phe	Tyr Gln Glu Gln	Ala	Gly Ser Leu
1475		1480		1485	
Ala Cys	Val Pro Cys Pro	Val	Gly Arg Thr Thr	Ile	Ser Ala Gly
1490		1495		1500	
Ala Phe	Ser Gln Thr His	Cys	Val Thr Asp Cys	Gln	Arg Asn Glu
1505		1510		1515	
Ala Gly	Leu Gln Cys Asp	Gln	Asn Gly Gln Tyr	Arg	Ala Ser Gln
1520		1525		1530	
Lys Asp	Arg Gly Ser Gly	Lys	Ala Phe Cys Val	Asp	Gly Glu Gly
1535		1540		1545	
Arg Arg	Leu Pro Trp Trp	Glu	Thr Glu Ala Pro	Leu	Glu Asp Ser
1550		1555		1560	



Gln	Cys	Leu	Met	Met	Gln	Lys	Phe	Glu	Lys	Val	Pro	Glu	Ser	Lys
1565						1570					1575			
Val	Ile	Phe	Asp	Ala	Asn	Ala	Pro	Val	Ala	Val	Arg	Ser	Lys	Val
1580						1585					1590			
Pro	Asp	Ser	Glu	Phe	Pro	Val	Met	Gln	Cys	Leu	Thr	Asp	Cys	Thr
1595						1600					1605			
Glu	Asp	Glu	Ala	Cys	Ser	Phe	Phe	Thr	Val	Ser	Thr	Thr	Glu	Pro
1610						1615					1620			
Glu	Ile	Ser	Cys	Asp	Phe	Tyr	Ala	Trp	Thr	Ser	Asp	Asn	Val	Ala
1625						1630					1635			
Cys	Met	Thr	Ser	Asp	Gln	Lys	Arg	Asp	Ala	Leu	Gly	Asn	Ser	Lys
1640						1645					1650			
Ala	Thr	Ser	Phe	Gly	Ser	Leu	Arg	Cys	Gln	Val	Lys	Val	Arg	Ser
1655						1660					1665			
His	Gly	Gln	Asp	Ser	Pro	Ala	Val	Tyr	Leu	Lys	Lys	Gly	Gln	Gly
1670						1675					1680			
Ser	Thr	Thr	Thr	Leu	Gln	Lys	Arg	Phe	Glu	Pro	Thr	Gly	Phe	Gln
1685						1690					1695			
Asn	Met	Leu	Ser	Gly	Leu	Tyr	Asn	Pro	Ile	Val	Phe	Ser	Ala	Ser
1700						1705					1710			
Gly	Ala	Asn	Leu	Thr	Asp	Ala	His	Leu	Phe	Cys	Leu	Leu	Ala	Cys
1715						1720					1725			
Asp	Arg	Asp	Leu	Cys	Cys	Asp	Gly	Phe	Val	Leu	Thr	Gln	Val	Gln
1730						1735					1740			
Gly	Gly	Ala	Ile	Ile	Cys	Gly	Leu	Leu	Ser	Ser	Pro	Ser	Val	Leu
1745						1750					1755			
Leu	Cys	Asn	Val	Lys	Asp	Trp	Met	Asp	Pro	Ser	Glu	Ala	Trp	Ala
1760						1765					1770			
Asn	Ala	Thr	Cys	Pro	Gly	Val	Thr	Tyr	Asp	Gln	Glu	Ser	His	Gln
1775						1780					1785			
Val	Ile	Leu	Arg	Leu	Gly	Asp	Gln	Glu	Phe	Ile	Lys	Ser	Leu	Thr

1790		1795		1800
Pro Leu Glu Gly Thr Gln Asp Thr Phe Thr Asn Phe Gln Gln Val	1805	1810		1815
Tyr Leu Trp Lys Asp Ser Asp Met Gly Ser Arg Pro Glu Ser Met	1820	1825		1830
Gly Cys Arg Lys Asx Thr Val Pro Arg Pro Ala Ser Pro Thr Glu	1835	1840		1845
Ala Gly Leu Thr Thr Glu Leu Phe Ser Pro Val Asp Leu Asn Gln	1850	1855		1860
Val Ile Val Asn Gly Asn Gln Ser Leu Ser Ser Gln Lys His Trp	1865	1870		1875
Leu Phe Lys His Leu Phe Ser Ala Gln Gln Ala Asn Leu Trp Cys	1880	1885		1890
Leu Ser Arg Cys Val Gln Glu His Ser Phe Cys Gln Leu Ala Glu	1895	1900		1905
Ile Thr Glu Ser Ala Ser Leu Tyr Phe Thr Cys Thr Leu Tyr Pro	1910	1915		1920
Glu Ala Gln Val Cys Asp Asp Ile Met Glu Ser Asn Ala Gln Gly	1925	1930		1935
Cys Arg Leu Ile Leu Pro Gln Met Pro Lys Ala Leu Phe Arg Lys	1940	1945		1950
Lys Val Ile Leu Glu Asp Lys Val Lys Asn Phe Tyr Thr Arg Leu	1955	1960		1965
Pro Phe Gln Lys Leu Met Gly Ile Ser Ile Arg Asn Lys Val Pro	1970	1975		1980
Met Ser Glu Lys Ser Ile Ser Asn Gly Phe Phe Glu Cys Glu Arg	1985	1990		1995
Arg Cys Asp Ala Asp Pro Cys Cys Thr Gly Phe Gly Phe Leu Asn	2000	2005		2010
Val Ser Gln Leu Lys Gly Gly Glu Val Thr Cys Leu Thr Leu Asn	2015	2020		2025

Ser	Leu	Gly	Ile	Gln	Met	Cys	Ser	Glu	Glu	Asn	Gly	Gly	Ala	Trp
2030						2035					2040			
Arg	Ile	Leu	Asp	Cys	Gly	Ser	Pro	Asp	Ile	Glu	Val	His	Thr	Tyr
2045						2050					2055			
Pro	Phe	Gly	Trp	Tyr	Gln	Lys	Pro	Ile	Ala	Gln	Asn	Asn	Ala	Pro
2060						2065					2070			
Ser	Phe	Cys	Pro	Leu	Val	Val	Leu	Pro	Ser	Leu	Thr	Glu	Lys	Val
2075						2080					2085			
Ser	Leu	Asp	Ser	Trp	Gln	Ser	Leu	Ala	Leu	Ser	Ser	Val	Val	Val
2090						2095					2100			
Asp	Pro	Ser	Ile	Arg	His	Phe	Asp	Val	Ala	His	Val	Ser	Thr	Ala
2105						2110					2115			
Ala	Thr	Ser	Asn	Phe	Ser	Ala	Val	Arg	Asp	Leu	Cys	Leu	Ser	Glu
2120						2125					2130			
Cys	Ser	Gln	His	Glu	Ala	Cys	Leu	Ile	Thr	Thr	Leu	Gln	Thr	Gln
2135						2140					2145			
Pro	Gly	Ala	Val	Arg	Cys	Met	Phe	Tyr	Ala	Asp	Thr	Gln	Ser	Cys
2150						2155					2160			
Thr	His	Ser	Leu	Gln	Gly	Gln	Asn	Cys	Arg	Leu	Leu	Leu	Arg	Glu
2165						2170					2175			
Glu	Ala	Thr	His	Ile	Tyr	Arg	Lys	Pro	Gly	Ile	Ser	Leu	Leu	Ser
2180						2185					2190			
Tyr	Glu	Ala	Ser	Val	Pro	Ser	Val	Pro	Ile	Ser	Thr	His	Gly	Arg
2195						2200					2205			
Leu	Leu	Gly	Arg	Ser	Gln	Ala	Ile	Gln	Val	Gly	Thr	Ser	Trp	Lys
2210						2215					2220			
Gln	Val	Asp	Gln	Phe	Leu	Gly	Val	Pro	Tyr	Ala	Ala	Pro	Pro	Leu
2225						2230					2235			
Ala	Glu	Arg	Arg	Phe	Gln	Ala	Pro	Glu	Pro	Leu	Asn	Trp	Thr	Gly
2240						2245					2250			

Ser	Trp	Asp	Ala	Ser	Lys	Pro	Arg	Ala	Ser	Cys	Trp	Gln	Pro	Gly
2255						2260					2265			
Thr	Arg	Thr	Ser	Thr	Ser	Pro	Gly	Val	Ser	Glu	Asp	Cys	Leu	Tyr
2270						2275					2280			
Leu	Asn	Val	Phe	Ile	Pro	Gln	Asn	Val	Ala	Pro	Asn	Ala	Ser	Val
2285						2290					2295			
Leu	Val	Phe	Phe	His	Asn	Thr	Met	Asp	Arg	Glu	Glu	Ser	Glu	Gly
2300						2305					2310			
Trp	Pro	Ala	Ile	Asp	Gly	Ser	Phe	Leu	Ala	Ala	Val	Gly	Asn	Leu
2315						2320					2325			
Ile	Val	Val	Thr	Ala	Ser	Tyr	Arg	Val	Gly	Val	Phe	Gly	Phe	Leu
2330						2335					2340			
Ser	Ser	Gly	Ser	Gly	Glu	Val	Ser	Gly	Asn	Trp	Gly	Leu	Leu	Asp
2345						2350					2355			
Gln	Val	Ala	Ala	Leu	Thr	Trp	Val	Gln	Thr	His	Ile	Arg	Gly	Phe
2360						2365					2370			
Gly	Gly	Asp	Pro	Arg	Arg	Val	Ser	Leu	Ala	Ala	Asp	Arg	Gly	Gly
2375						2380					2385			
Ala	Asp	Val	Ala	Ser	Ile	His	Leu	Leu	Thr	Ala	Arg	Ala	Thr	Asn
2390						2395					2400			
Ser	Gln	Leu	Phe	Arg	Arg	Ala	Val	Leu	Met	Gly	Gly	Ser	Ala	Leu
2405						2410					2415			
Ser	Pro	Ala	Ala	Val	Ile	Ser	His	Glu	Arg	Ala	Gln	Gln	Gln	Ala
2420						2425					2430			
Ile	Ala	Leu	Ala	Lys	Glu	Val	Ser	Cys	Pro	Met	Ser	Ser	Ser	Gln
2435						2440					2445			
Glu	Val	Val	Ser	Cys	Leu	Arg	Gln	Lys	Pro	Ala	Asn	Val	Leu	Asn
2450						2455					2460			
Asp	Ala	Gln	Thr	Lys	Leu	Leu	Ala	Val	Ser	Gly	Pro	Phe	His	Tyr
2465						2470					2475			

Trp	Gly	Pro	Val	Ile	Asp	Gly	His	Phe	Leu	Arg	Glu	Pro	Pro	Ala
2480						2485					2490			
Arg	Ala	Leu	Lys	Arg	Ser	Leu	Xaa	Val	Glu	Val	Asp	Leu	Leu	Ile
2495						2500					2505			
Gly	Ser	Ser	Gln	Asp	Asp	Gly	Leu	Ile	Asn	Arg	Ala	Lys	Ala	Val
2510						2515					2520			
Lys	Gln	Phe	Glu	Glu	Ser	Gln	Gly	Arg	Thr	Ser	Ser	Lys	Thr	Ala
2525						2530					2535			
Phe	Tyr	Gln	Ala	Leu	Gln	Asn	Ser	Leu	Gly	Gly	Glu	Asp	Ser	Asp
2540						2545					2550			
Ala	Arg	Val	Glu	Ala	Ala	Ala	Thr	Trp	Tyr	Tyr	Ser	Leu	Glu	His
2555						2560					2565			
Ser	Thr	Asp	Asp	Tyr	Ala	Ser	Phe	Ser	Arg	Ala	Leu	Glu	Asn	Ala
2570						2575					2580			
Thr	Arg	Asp	Tyr	Phe	Ile	Ile	Cys	Pro	Ile	Ile	Asp	Met	Ala	Ser
2585						2590					2595			
Ala	Trp	Ala	Lys	Arg	Ala	Arg	Gly	Asn	Val	Phe	Met	Tyr	His	Ala
2600						2605					2610			
Pro	Glu	Asn	Tyr	Gly	His	Gly	Ser	Leu	Glu	Leu	Leu	Ala	Asp	Val
2615						2620					2625			
Gln	Phe	Ala	Leu	Gly	Leu	Pro	Phe	Tyr	Pro	Ala	Tyr	Glu	Gly	Gln
2630						2635					2640			
Phe	Ser	Leu	Glu	Glu	Lys	Ser	Leu	Ser	Leu	Lys	Ile	Met	Gln	Tyr
2645						2650					2655			
Phe	Ser	His	Phe	Ile	Arg	Ser	Gly	Asn	Pro	Asn	Tyr	Pro	Tyr	Glu
2660						2665					2670			
Phe	Ser	Arg	Lys	Val	Pro	Thr	Phe	Ala	Thr	Pro	Trp	Pro	Asp	Phe
2675						2680					2685			
Val	Pro	Arg	Ala	Gly	Gly	Glu	Asn	Tyr	Lys	Glu	Phe	Ser	Glu	Leu
2690						2695					2700			
Leu	Pro	Asn	Arg	Gln	Gly	Leu	Lys	Lys	Ala	Asp	Cys	Ser	Phe	Trp

2705                      2710                      2715  
 Ser Lys Tyr Ile Ser Ser Leu Lys Thr Ser Ala Asp Gly Ala Lys  
 2720                      2725                      2730  
  
 Gly Gly Gln Ser Ala Glu Ser Glu Glu Glu Glu Leu Thr Ala Gly  
 2735                      2740                      2745  
  
 Ser Gly Leu Arg Glu Asp Leu Leu Ser Leu Gln Glu Pro Gly Ser  
 2750                      2755                      2760  
  
 Lys Thr Tyr Ser Lys  
 2765

<210> 73  
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<400> 73

Thr Ile Ser Pro Leu Asn Thr Ser Tyr Lys  
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<210> 74  
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<220>  
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Arg Thr Leu Thr Leu Leu Ser Val Thr Arg  
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<210> 75  
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<220>  
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<400> 75

Ile Val Pro Ser Tyr Thr Tyr Tyr Arg

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<210> 77  
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<400> 77

His Thr Gln Val Leu Phe Ile Ala Lys  
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<400> 78

Phe Val Ser Asn Leu Ala Thr Gly Arg  
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<400> 79

Ser Ser Phe Thr Thr Ile Asn Lys  
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<210> 80  
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Thr Thr Ile Asn Tyr Thr Leu Trp Arg  
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<210> 81  
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Ser Met Leu Glu Val Phe Glu Gly Lys  
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<210> 82  
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Ser Val Phe Ala His Pro Arg Lys  
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<210> 83  
<211> 9  
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<400> 83

Ile Val Tyr Pro Pro Leu His Glu Arg  
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<210> 84  
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<220>  
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<400> 84

Tyr Val Phe Pro Val Ile Phe Ser Lys  
 1 5

<210> 85  
 <211> 9  
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<220>  
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<400> 85

Ser Val Leu Glu Val Phe Glu Gly Lys  
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<210> 86  
 <211> 9  
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<220>  
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<400> 86

Leu Val His Phe Leu Leu Leu Lys Lys  
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<210> 87  
 <211> 9  
 <212> PRT  
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<220>  
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<400> 87

Val Val Phe Gly Ile Leu Ile Lys Arg  
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<210> 88  
 <211> 9  
 <212> PRT  
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<220>  
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<400> 88

Lys Ile Arg Lys Tyr Thr Met Arg Arg  
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<210> 89  
<211> 9  
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<400> 89

Val Leu Arg Glu Asn Thr Ser Pro Lys  
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<210> 90  
<211> 9  
<212> PRT  
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<220>  
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<400> 90

Leu Val Lys Ser Pro Asn His Val Lys  
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<210> 91  
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<212> PRT  
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<220>  
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<400> 91

Lys Val Thr Asp Phe Gly Leu Ala Arg  
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<210> 92  
<211> 9  
<212> PRT  
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<220>  
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<400> 92

Met Ala Leu Glu Ser Ile Leu Arg Arg  
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<210> 93  
 <211> 10  
 <212> PRT  
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<220>  
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<400> 93

Leu Val Ser Glu Phe Ser Arg Met Ala Arg  
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<210> 94  
 <211> 10  
 <212> PRT  
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<220>  
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<400> 94

Ala Ser Pro Leu Asp Ser Thr Phe Tyr Arg  
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<210> 95  
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<220>  
 <223> Synthetic peptide derived from Homo sapiens p53

<400> 95

Lys Thr Tyr Gln Gly Ser Tyr Gly Phe Lys  
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<210> 96  
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<400> 96

Cys Thr Tyr Ser Pro Ala Leu Asn Lys  
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<400> 97

Gly Thr Arg Val Arg Ala Met Ala Ile Tyr Lys  
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<210> 98  
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<400> 98

Arg Val Arg Ala Met Ala Ile Tyr Arg  
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<400> 99

Arg Val Cys Ala Cys Pro Gly Arg  
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<210> 100  
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<400> 100

Ile Tyr Pro Asn Ala Ser Leu Leu Ile  
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<400> 101

Leu Tyr Gly Pro Asp Ala Pro Thr Ile  
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<210> 102

<211> 10

<212> PRT

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<223> Synthetic peptide derived from Homo sapiens carcinoembryonic antigen

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Gln Tyr Ser Trp Phe Val Asn Gly Thr Phe  
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<210> 103

<211> 9

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<220>

<223> Synthetic peptide derived from Homo sapiens carcinoembryonic antigen

<400> 103

Val Tyr Ala Glu Pro Pro Lys Pro Phe  
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<210> 104

<211> 11

<212> PRT

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<220>

<223> Synthetic peptide derived from Homo sapiens carcinoembryonic antigen

<400> 104

Thr Tyr Leu Trp Trp Val Asn Asn Gln Ser Leu  
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<210> 105

<211> 10

<212> PRT

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<220>

<223> Synthetic peptide derived from Homo sapiens carcinoembryonic antigen

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Tyr Tyr Arg Pro Gly Val Asn Leu Ser Phe  
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<210> 106  
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<220>  
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<400> 106

Gln Tyr Ser Trp Leu Ile Asp Gly Asn Phe  
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<210> 107  
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<400> 107

Thr Tyr Leu Trp Trp Val Asn Gly Gln Ser Leu  
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<210> 108  
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 <212> PRT  
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<400> 108

Leu Tyr Gly Pro Asp Thr Pro Ile Ile  
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<210> 109  
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<220>  
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<400> 109

Ser Tyr Leu Ser Gly Ala Asn Leu Asn Phe  
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<210> 110  
 <211> 9  
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<220>  
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<400> 110

Thr Tyr Ala Cys Phe Val Ser Asn Leu  
 1 5

<210> 111  
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 <212> PRT  
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<220>  
 <223> Synthetic peptide derived from Homo sapiens melanoma antigens

<400> 111

Met Tyr Pro Asp Leu Glu Ser Glu Phe  
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<210> 112  
 <211> 10  
 <212> PRT  
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<220>  
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<400> 112

Leu Tyr Ile Leu Val Thr Cys Leu Gly Phe  
 1 5 10

<210> 113  
 <211> 9  
 <212> PRT  
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<220>  
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<400> 113

Val Met Pro Lys Thr Gly Leu Leu Ile  
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<210> 114  
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 <400> 114

Leu Trp Gly Pro Arg Ala Leu Ile  
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<210> 115  
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 <400> 115

Ser Tyr Val Lys Val Leu His His Thr Phe  
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<210> 116  
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Asn Trp Gln Tyr Phe Phe Pro Val Ile  
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<210> 117  
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 <400> 117

Leu Tyr Ile Phe Ala Thr Cys Leu Gly Phe  
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<210> 118  
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<220>  
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 <400> 118

Ile Met Pro Lys Ala Gly Leu Leu Ile  
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<210> 119  
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Ser Tyr Pro Pro Leu His Glu Trp Val Leu  
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Pro Tyr Val Ser Arg Leu Leu Gly Phe  
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<210> 121  
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Ser Tyr Gly Val Thr Val Trp Glu Phe  
 1 5

<210> 122  
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Val Tyr Met Ile Met Val Lys Cys Trp Met Ile  
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<210> 123  
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Arg Tyr Arg Glu Leu Val Ser Glu Phe  
 1 5

<210> 124  
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<220>  
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 <400> 124

Thr Tyr Gln Gly Ser Tyr Gly Phe Arg Leu  
 1 5 10

<210> 125  
 <211> 10  
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Thr Tyr Gln Gly Ser Tyr Gly Phe Arg Phe  
 1 5 10

<210> 126  
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Thr Tyr Ser Pro Ala Leu Asn Lys Met Phe  
 1 5 10

<210> 127

<211> 11  
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<220>  
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<400> 127

Arg Ser Asp Ser Val Ile Leu Asn Val Leu Tyr  
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<210> 128  
 <211> 9  
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<400> 128

Ile Thr Asp Asn Asn Ser Gly Ser Tyr  
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<210> 129  
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<220>  
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<400> 129

His Ser Asp Pro Val Ile Leu Asn Val Leu Tyr  
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<210> 130  
 <211> 10  
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<220>  
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<400> 130

Pro Thr Asp Ser Pro Ser Tyr Thr Tyr Tyr  
 1                      5                      10

<210> 131  
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<212> PRT  
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<400> 131

Ala Ala Asp Asn Pro Pro Ala Gln Tyr  
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<210> 132  
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<400> 132

Ile Thr Asp Lys Asn Ser Gly Leu Tyr  
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<210> 133  
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<400> 133

Arg Ser Asp Pro Val Thr Leu Asp Val Leu Tyr  
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<210> 134  
 <211> 10  
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His Ser Ala Ser Asn Pro Ser Pro Gln Tyr  
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<210> 135  
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<400> 135

Val Met Asp Gly Val Gly Ser Pro Tyr  
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<210> 136

<211> 10

<212> PRT

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<223> Synthetic peptide derived from Homo sapiens Her2/neu

<400> 136

Cys Thr Gln Ile Ala Lys Gly Met Ser Tyr  
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<210> 137

<211> 9

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<223> Synthetic peptide derived from Homo sapiens Her2/neu

<400> 137

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<210> 138

<211> 10

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<223> Synthetic peptide derived from Homo sapiens Her2/neu

<400> 138

Phe Thr His Gln Ser Asp Val Trp Ser Tyr  
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<223> Synthetic peptide derived from Homo sapiens Her2/neu

<400> 139

Pro Ala Asp Pro Leu Asp Ser Thr Phe Tyr  
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<400> 140

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<223> Synthetic peptide derived from Homo sapiens Her2/neu

<400> 141

Leu Thr Asp Ser Pro Gln Pro Glu Tyr  
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<210> 142

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Phe Ser Pro Ala Phe Asp Asn Leu Tyr Tyr  
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<210> 143

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<223> Synthetic peptide derived from Homo sapiens Her2/neu

<400> 143

Gly Thr Asp Thr Ala Glu Asn Pro Glu Tyr  
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<210> 144  
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<400> 144

Ala Ser Asp Phe Ser Thr Thr Ile Asn Tyr  
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<210> 145  
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<400> 145

Val Thr Asp Leu Gly Leu Ser Tyr  
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<210> 146  
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<400> 146

Met Gln Asp Leu Val Gln Glu Asn Tyr  
1                      5

<210> 147  
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Ala Ser Ser Leu Pro Thr Thr Met Asn Tyr  
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<210> 148  
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Gly Thr Val Val Gly Asn Trp Gln Tyr  
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<210> 149  
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Glu Val Asp Pro Ile Gly His Leu Tyr  
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<210> 150  
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Leu Thr Asp His Phe Val Gln Glu Asn Tyr  
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<210> 151  
 <211> 9  
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 <400> 151

Ile Thr Gly Gly Pro His Ile Ser Tyr  
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<210> 152  
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 <400> 152



Pro Thr Gln Lys Thr Tyr Gln Gly Ser Tyr  
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<210> 153  
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<220>  
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 <400> 153

Gly Thr Asp Lys Ser Val Thr Cys Thr Tyr  
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<210> 154  
 <211> 10  
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<220>  
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 <400> 154

Arg Val Asp Gly Asn Leu Arg Val Glu Tyr  
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<210> 155  
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 <400> 155

Gly Ser Asp Cys Thr Thr Ile His Tyr Asn Tyr  
 1 5 10

<210> 156  
 <211> 325  
 <212> PRT  
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<220>  
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<400> 156

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Val Pro Gly Ser Arg Gly Val Pro Ile Ser His Leu Asp Ile Leu Lys  
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 Lys Leu Ser Glu Tyr Leu Gln Leu Val Gly Ala Ala Ala Ile Ser Pro  
 35 40 45  
 Ser Tyr Thr Tyr Tyr Arg Lys Ala Ala Ala Thr Tyr Ala Cys Phe Val  
 50 55 60  
 Ser Asn Leu Lys Val Thr Asp Phe Gly Leu Ala Arg Gly Ala Ala Ala  
 65 70 75 80  
 His Leu Phe Gly Tyr Ser Ile Tyr Lys Asn Ala Gln Tyr Ser Trp Phe  
 85 90 95  
 Val Asn Gly Thr Phe Lys Ala Ala Ala Lys Val Phe Gly Ser Leu Ala  
 100 105 110  
 Phe Val Asn Ala Ala Ala Pro Tyr Val Ser Arg Leu Leu Gly Ile Asn  
 115 120 125  
 Ile Met Ile Gly His Leu Val Gly Val Asn Leu Leu Thr Phe Trp Asn  
 130 135 140  
 Pro Pro Val Ile Val Tyr Pro Pro Leu His Glu Arg Asn Ala Ala Ala  
 145 150 155 160  
 Glu Tyr Leu Gln Leu Met Phe Gly Ile Asn Ala Ile Met Pro Lys Ala  
 165 170 175  
 Gly Leu Leu Ile Asn Lys Thr Tyr Gln Gly Ser Tyr Gly Phe Lys Lys  
 180 185 190  
 Ala Ala Ala Arg Val Arg Ala Met Ala Ile Tyr Arg Asn Ala Ala Ala  
 195 200 205  
 Arg Tyr Ala Arg Asp Pro Gln Arg Phe Gly Ala Ala Ala Lys Leu Cys  
 210 215 220  
 Pro Val Gln Leu Trp Val Asn Ala Ser Met Pro Pro Pro Gly Thr Arg  
 225 230 235 240  
 Val Gly Ala Ala Ala Val Val Leu Gly Val Val Phe Gly Ile Ala Lys  
 245 250 255  
 Phe Val Ala Ala Trp Thr Leu Lys Ala Ala Ala Lys Val Ala Glu Ile

				260					265									270
Val	His	Phe	Leu	Asn	Thr	Tyr	Ser	Pro	Ala	Leu	Asn	Lys	Met	Phe	Lys			
		275					280					285						
Ala	Ala	Ser	Tyr	Gly	Phe	Arg	Leu	Gly	Phe	Phe	Lys	Ala	Ala	Ala	Ser			
	290					295					300							
Ser	Phe	Ser	Thr	Thr	Ile	Asn	Lys	Lys	Ala	Ala	Ala	Val	Val	Phe	Gly			
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Ile	Leu	Ile	Lys	Arg														
				325														
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Val	Pro	Gly	Ser	Arg	Gly	Ile	Val	Tyr	Pro	Pro	Leu	His	Glu	Arg	Asn			
			20					25					30					
Ala	Ala	Ala	Glu	Tyr	Leu	Gln	Leu	Leu	Phe	Gly	Ile	Asn	Ala	Ile	Met			
		35					40					45						
Pro	Lys	Ala	Gly	Leu	Leu	Ile	Asn	Lys	Thr	Tyr	Gln	Gly	Ser	Tyr	Gly			
	50					55					60							
Phe	Lys	Lys	Ala	Ala	Ala	Arg	Val	Arg	Ala	Met	Ala	Ile	Tyr	Arg	Asn			
65					70					75					80			
Ala	Ala	Ala	Arg	Tyr	Ala	Arg	Asp	Pro	Gln	Arg	Phe	Gly	Ala	Ala	Ala			
				85					90					95				
Lys	Leu	Cys	Pro	Val	Gln	Leu	Trp	Val	Asn	Ala	Ser	Met	Pro	Pro	Pro			
			100					105					110					
Gly	Thr	Arg	Val	Gly	Ala	Ala	Ala	Val	Val	Leu	Gly	Val	Val	Phe	Gly			
		115					120					125						

Ile Ala Lys Phe Val Ala Ala Trp Thr Leu Lys Ala Ala Ala Lys Val  
 130 135 140

Ala Glu Leu Val Trp Phe Leu Asn Ala Ala Ala Thr Tyr Ser Pro Ala  
 145 150 155 160

Leu Asn Lys Met Phe Lys Ala Ala Ser Tyr Gly Phe Arg Leu Gly Phe  
 165 170 175

Phe Lys Ala Ala Ala Ser Ser Phe Ser Thr Thr Ile Asn Lys Lys Ala  
 180 185 190

Ala Ala Val Val Phe Gly Ile Leu Ile Lys Arg Val Pro Ile Ser His  
 195 200 205

Leu Gly Ile Leu Lys Lys Leu Ser Glu Tyr Leu Gln Leu Val Gly Ala  
 210 215 220

Ala Ala Ile Ser Pro Ser Tyr Thr Tyr Tyr Arg Lys Ala Ala Ala Thr  
 225 230 235 240

Tyr Ala Cys Phe Val Ser Asn Leu Lys Val Phe Gly Ser Leu Ala Phe  
 245 250 255

Val Asn Ala Ala Ala Pro Tyr Val Ser Arg Leu Leu Gly Ile Asn Ala  
 260 265 270

His Leu Phe Gly Tyr Ser Asp Tyr Lys Asn Ala Gln Tyr Ser Trp Phe  
 275 280 285

Val Asn Gly Thr Phe Lys Ala Ala Ala Lys Val Thr Asp Phe Gly Leu  
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Ala Arg Asn Ile Met Met Gly His Leu Val Gly Val Asn Leu Leu Thr  
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Phe Trp Asn Pro Pro Val  
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 <212> PRT  
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<220>  
 <223> Polypeptide 3

<400> 158

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			20					25					30		
Lys	Ala	Ala	Ser	Tyr	Gly	Phe	Arg	Leu	Gly	Phe	Phe	Lys	Ala	Ala	Ala
		35					40					45			
Ser	Ser	Phe	Ser	Thr	Thr	Ile	Asn	Lys	Lys	Ala	Ala	Ala	Val	Val	Phe
	50					55						60			
Gly	Ile	Leu	Ile	Lys	Arg	Asn	Ala	Ala	Ala	Ala	Lys	Phe	Val	Ala	Ala
65					70					75					80
Trp	Thr	Leu	Lys	Ala	Ala	Ala	Lys	Val	Ala	Glu	Ile	Val	His	Phe	Leu
				85					90					95	
Lys	Val	Thr	Asp	Phe	Gly	Leu	Ala	Arg	Gly	Ala	Ala	Ala	His	Leu	Phe
			100					105					110		
Pro	Tyr	Ser	Trp	Tyr	Lys	Asn	Ala	Thr	Tyr	Ala	Cys	Phe	Val	Ser	Asn
		115					120					125			
Leu	Lys	Ala	Ala	Ala	Val	Pro	Ile	Ser	His	Leu	Glu	Ile	Leu	Lys	Lys
	130					135					140				
Leu	Ser	Glu	Tyr	Leu	Gln	Leu	Val	Gly	Ala	Ala	Ala	Ile	Ser	Pro	Ser
145					150					155					160
Tyr	Thr	Tyr	Tyr	Arg	Lys	Ala	Ala	Ala	Gln	Tyr	Ser	Trp	Phe	Val	Asn
				165					170					175	
Gly	Thr	Phe	Lys	Ala	Ala	Ala	Lys	Val	Phe	Gly	Ser	Leu	Ala	Phe	Val
			180					185					190		
Asn	Ala	Ala	Ala	Pro	Tyr	Val	Ser	Arg	Leu	Leu	Gly	Ile	Asn	Ile	Met
		195					200					205			
Ile	Gly	His	Leu	Val	Gly	Val	Asn	Leu	Leu	Thr	Phe	Trp	Asn	Pro	Pro
	210					215					220				
Val	Ile	Val	Tyr	Pro	Pro	Leu	His	Glu	Arg	Asn	Ala	Ala	Ala	Glu	Tyr
225					230					235					240

Leu Gln Leu Met Phe Gly Ile Asn Ser Met Pro Pro Pro Gly Thr Arg  
                   245                  250                  255

Val Gly Ala Ala Ala Val Val Leu Gly Val Val Phe Gly Ile Asn Ala  
                   260                  265                  270

Ile Met Pro Lys Ala Gly Leu Leu Ile Asn Lys Thr Tyr Gln Gly Ser  
                   275                  280                  285

Tyr Gly Phe Lys Lys Ala Ala Ala Arg Val Arg Ala Met Ala Ile Tyr  
                   290                  295                  300

Arg Asn Ala Ala Ala Arg Tyr Ala Arg Asp Pro Gln Arg Phe Gly Ala  
                   305                  310                  315                  320

Ala Ala Lys Leu Cys Pro Val Gln Leu Trp Val  
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 <212> DNA  
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<220>  
 <223> Polynucleotide 1

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 gtcggcgctg cagctattag ccctagctac acttattatc ggaaggctgc tgctacctat 180  
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 cacctgttcg ggtactctat ctataaaaac gcccaatatt cctggtttgt gaatggaacc 300  
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 gaatatctgc agctgatgtt cggcatcaat gccattatgc cttaaagccgg actgctgac 540  
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 gccaagctgt gccagtgca gctgtgggtg aacgcttcta tgccccctcc aggcacaaga 720  
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cccgactga acaaaatggt taaagccgca tcctatggct tcaggctggg gttctttaag 900  
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 <212> DNA  
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<220>  
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 ctgttcggca ttaacgccat tatgcctaaa gcaggcctgc tcatcaacaa aacttaccag 180  
 ggaagctatg ggttcaagaa ggcagctgca agagtcaggg ccatggccat ctatcggaat 240  
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 gtgcaactct gggatcaatgc ctccatgcct ccaccggaa caagagtcgg agccgccgcc 360  
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 aagaatgcc agtactcctg gttcgtgaac ggcacctca aggcagccgc aaaggtgacc 900  
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<220>  
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gcagtgggtct ttgggatacct catcaaaagg aacgcagccg cagctaagtt cgtcgctgct      240
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acctacgctt gtttcgtgag caacctgaag gctgccgcag tgccaatctc ccatctcgag      420
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<210> 162

<211> 9

<212> PRT

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<400> 162

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<210> 163

<211> 9

<212> PRT

<213> Artificial Sequence

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<223> Synthetic peptide derived from Homo sapiens carcinoembryonic antigen

<400> 163

Leu Leu Thr Phe Trp Asn Pro Pro Val



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<210> 164  
 <211> 9  
 <212> PRT  
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<220>  
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 <400> 164

Lys Val Phe Gly Ser Leu Ala Phe Val  
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<210> 165  
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 <400> 165

Val Val Leu Gly Val Val Phe Gly Ile  
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<210> 166  
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Ser Met Pro Pro Pro Gly Thr Arg Val  
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<210> 167  
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<220>  
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<210> 168  
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<212> PRT  
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<220>  
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<220>  
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His Leu Phe Gly Tyr Ser Ile Tyr Lys  
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<400> 172

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<400> 173

Val Val Phe Gly Ile Leu Ile Lys Arg  
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<400> 174

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<400> 175

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<210> 176  
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<400> 176

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<210> 183  
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<400> 183

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<400> 184

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Val Pro Ile Ser His Leu Asp Ile Leu  
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<220>  
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<210> 188  
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 <212> PRT  
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<220>  
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 <400> 188

Lys Val Ala Glu Leu Val Trp Phe Leu  
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<210> 189  
 <211> 9  
 <212> PRT  
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<220>  
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<400> 189

His Leu Phe Gly Tyr Ser Asp Tyr Lys  
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<210> 190

<211> 9

<212> PRT

<213> Artificial Sequence

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<223> Synthetic peptide derived from Homo sapiens melanoma antigens

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<210> 191

<211> 9

<212> PRT

<213> Artificial Sequence

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<223> Synthetic peptide derived from Homo sapiens melanoma antigens

<400> 191

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<211> 9

<212> PRT

<213> Artificial Sequence

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<223> Synthetic peptide derived from Homo sapiens carcinoembryonic antigen

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<210> 193

<211> 9

<212> PRT

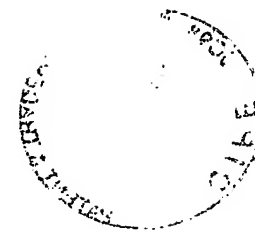
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<223> Synthetic peptide derived from Homo sapiens melanoma antigens

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Lys Val Ala Glu Ile Val His Phe Leu



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<223> Synthetic peptide derived from Homo sapiens carcinoembryonic antigen

&lt;400&gt; 194

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&lt;220&gt;

<223> Synthetic peptide derived from Homo sapiens melanoma antigens

&lt;400&gt; 195

Glu Tyr Leu Gln Leu Met Phe Gly Ile

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<210> 196  
<211> 9  
<212> PRT  
<213> Artificial Sequence

&lt;220&gt;

<223> Synthetic peptide derived from Homo sapiens melanoma antigens

&lt;400&gt; 196

Val Pro Ile Ser His Leu Glu Ile Leu

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